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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,735	05/25/2004	Chih-Chiang Wen	MTKP0165USA	3734
27765	7590	10/31/2008	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116				PORTKA, GARY J
ART UNIT		PAPER NUMBER		
		2188		
NOTIFICATION DATE			DELIVERY MODE	
10/31/2008			ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/709,735	WEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gary J. Portka	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 17 July 2008.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-4,7-12,14-16,18-23,25-28 and 30-35 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-4,7-12,14-16,18-23,25-28 and 30-35 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date July 8, 2008.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_ .

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

1. Claims 1-4, 7-12, 14-16, 18-23, 25-28, and 30-35 are pending.

### ***Response to Arguments***

2. Applicant's arguments have been considered but are not persuasive. Applicants have argued that in Lewis the boot PROM is part of the communication device, not the host, and therefore does not receive the recited initialization data from the host. Examiner agrees that the boot PROM is in the communication device, and separate from the host. However, Lewis describes that the boot PROM has "routines or firmware" [0029], that while not often boot PROM may be updated [0030], that the boot PROM may contain routines and/or data reusable by the firmware routines [0030], the boot PROM allows for ease of update of firmware [0031], and that the boot PROM may be combined with the firmware into a single device such as nonvolatile flash [0039]. These descriptions in combination clearly indicate to an artisan that, since the routines of the boot PROM may be considered firmware, may be updated like the firmware, may contain elements used by the firmware, and may be on the same device as the firmware, that they may certainly be updated the same as the firmware. That is, while Lewis may require initialization data at first be supplied from the "boot PROM" routines of the communication device, a firmware upgrade that includes updates to part of all of those boot PROM routines or data used by the firmware may be forwarded to and received by the device, those new instructions also required to initialize the device before execution of operational firmware, as recited.

***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on July 8, 2008 was considered by the examiner.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 7, 11, 15, 16, 20, 21, 25, 27, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewis et al., US 2003/0097552 A1 (hereinafter "Lewis").

6. As to claims 1, 7, 11, 15, 16, 20, 21, 25, 27, and 30, Lewis discloses a circuit (Fig. 1), download mode, computer system, and controller comprising bus interface (at 106) for communications with a host (management device, 0010), an interface unit electrically coupled to the bus interface for downloading operational firmware from the host (connections between 106 and 112), a control circuit (including 110, 114, 116, and their connections) electrically coupled to the interface unit for transferring the downloaded operation firmware to a volatile memory (112), microprocessor (108) electrically coupled to the control circuit for executing the downloaded operational firmware while stored in the volatile memory, wherein the microprocessor controls the

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normal operations of the device circuit according to the downloaded firmware (see Abstract, 0010, 0027, 0038). Lewis also discloses receiving initialization data from the host (0030, 0031, 0039, "boot PROM routines").

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-2 and 7-12, 14-16, 18-23, 25-28, and 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hu, US 6,170,043 B1 (hereinafter "Hu") and Lewis.

9. The applied reference (Hu) has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer

in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

10. As to claims 1, 7, 11, 15, 16, 20, 21, 25, 27, and 30, Hu discloses an electronic device circuit, download mode, computer system, and controller comprising: a bus interface for communications with a host (Fig. 2, 214, col. 1 lines 63-67); an interface unit electrically coupled to the bus interface for downloading operational firmware and initialization data from the host (Fig. 2, #206, col. 1 line 63 - col. 2 line 6, & col. 5 lines 38-43); a control circuit electrically coupled to the interface unit (Fig. 2, #208) for transferring the downloaded operational firmware to a volatile memory (Fig. 2, #210, #202 & col. 1 line 63 – col. 2 line 6); wherein the microprocessor controls the normal operations of the optical disc drive according to the downloaded operational firmware (col. 2 lines 6-17 & 20-29, col. 4 lines 8-19). Hu does not disclose initialization data received from the host, nor that the firmware is executed while stored in volatile memory. However, Lewis discloses a firmware update method that stores firmware updates in and executes them from a volatile memory, and also receives initialization data (as cited above). allows for automatic update of device firmware, and also likely reduces cost due to removing the need for non-volatile memory (Lewis 0037). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use the firmware updating method of Lewis for the electronic device circuit of Hu, because it would allow automatic updates and reduce cost.

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11. As to claims 2, 14, 18, 23, and 28, Hu further discloses the optical disc drive circuit of claim 1 wherein the bus interface conforms to USB, IDE, SATA, SAS, or SCSI interface standards (Fig. 2, col. 2 lines 59-65, col. 3 lines 45-46).

12. As to claims 7, 15, 20, 30, and 31, Hu further discloses the optical disc drive circuit of claim 1 wherein the host is a computer system (Fig. 2, #212).

13. As per claims 8 and 31, Hu further discloses the optical disc drive circuit of claim 1 wherein the microprocessor executes the downloaded operational firmware without accessing a non-volatile memory (col. 6 lines 17-28).

14. As to claim 9, Hu further discloses the optical disc drive circuit of claim 1 wherein the normal operations of the optical disc drive at least include reading data from an optical disc (col. 3 lines 62-66).

15. As to claims 10 and 26, Hu further discloses the optical disc drive circuit of claim 1 wherein the volatile memory comprises the downloaded operational firmware being executed by the microprocessor to control normal operations of the optical disc drive (col. 4 lines 8-19).

16. As to claim 12, Hu further discloses the optical disc drive of claim 11 wherein the normal operations of the optical disc drive at least include reading data from an optical disc, processing the data, and transferring the processed data to the host [col. 3 line 62 - col. 4 line 7].

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17. As to claim 19, Hu further discloses the method of claim 16 further comprising the optical disc drive transmitting an electrical signal to an application program in the host to begin downloading the operational firmware (col. 5 lines 25-27).

18. As to claim 22, Hu further discloses the computer system of claim 21 wherein the normal operations of the optical disc drive at least include controlling the rotational speed of an optical disc in the optical disc drive and reading data from the optical disc (col. 3 lines 63-66).

19. As to claim 32, Hu further discloses the optical disc drive circuit of claim 27 wherein the host system comprises the volatile memory (Figure 2, #212 & col. 4 lines 8-19).

20. As to claim 33, Hu further discloses the optical disc drive circuit of claim 27 wherein the host system comprises a host controller accessing the volatile memory that is shared by the host system and the microprocessor during the normal operation (col. 4 lines 8-19).

21. As to claim 34, Hu further discloses the optical disc drive circuit of claim 27 wherein the volatile memory is accessed only by the optical disc drive circuit on the normal operation (col. 3 lines 48-57).

22. As to claim 35, Hu further discloses the optical disc drive circuit of claim 27 wherein the optical disc drive circuit comprises the volatile memory (Fig. 2, #212, #202 & col. 4 lines 8-19).

23. Claims 3 & 4 are rejected under 35 U.S.C. 103(a) as being obvious over Lewis, as applied to claim 1 above, and further in view of Kamihara et al (US PGPub # 2002/0169904), herein Kamihara.

24. Lewis does not expressly disclose using macros. However, as per claim 3, Kamihara teaches the use of the optical disc drive circuit of claim 1 wherein the interface unit is a macro (Figure 6, #20 & ¶0095).

25. As to claim 4, Kamihara further discloses the optical disc drive circuit of claim 3 wherein the macro comprises handshaking, data reception, and writing received data into the memory functions [¶0095-0097 & ¶0102].

26. Lewis and Kamihara are analogous art because they are from the same field of endeavor: computer system memory management. At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine a macro interface unit, as disclosed by Kamihara, within the disclosed by Lewis. The motivation for doing so would have been for the benefit of aiding the implementation of data transfers, as taught by Kamihara in ¶0096.

### ***Conclusion***

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary J Portka/  
Primary Examiner, Art Unit 2188  
October 16, 2008

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